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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,301

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Thomas Klettke

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EXAMINER

PEPITONE, MICHAEL F

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,301	Applicant(s) KLETTKE ET AL.	
	Examiner MICHAEL PEPITONE	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-29 is/are rejected.
- 7) ☒ Claim(s) 28 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/24/09 has been entered.

Claim Objections

Applicant is advised that should claim 15 be found allowable, claim 28 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Applicant is advised that should claim 21 be found allowable, claim 29 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15-20 and 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zech *et al.* (WO 01/17483). For the purpose of examination, Zech *et al.* (US 6,894,144) was used as the English translation of Zech *et al.* (WO 01/17483).

Regarding claim 15: Zech *et al.* teaches a composition (1:10-11) comprising a mixture of N-alkylaziridino compounds (5:56-62; 6:53-64), wherein N-alkylaziridino compounds have aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4, wherein preferred embodiments contain at least 2, or at least 3 aziridino groups {corresponding to instant formula Z1} (6:53-64), wherein the compounds have different polymer backbones (6:65-7:4). Zech *et al.* teaches mixtures of at least up to 60% of polyether

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compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and at least up to 5% of polyether compounds which contain at least 3 aziridino groups (6:53-67).

Zech *et al.* does not disclose an embodiment containing a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2}. However, at the time of invention a person of ordinary skill in the art would have found it obvious to utilized a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2} in a dental impression material based on the invention of Zech *et al.*, and would have been motivated to do so since Zech *et al.* suggests that N-alkylaziridino compounds having aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4 {corresponding to instant formula Z1} are useful as constituent (D) of the base component (5:56-61; 6:58-67).

Regarding claim 16-18: Zech *et al.* teaches N-alkylaziridino polyethers {corresponding to Z1 and Z2} [instant claim 16 and 18] comprising tetrahydrofuran units [instant claim 17] (7:1-4).

Regarding claim 19: Zech *et al.* teaches N-alkylaziridino polyethers having a mass of at least 500 {based on 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being 1 {corresponding to instant formula Z2} (6:53-57).

Regarding claim 20: Zech *et al.* teaches additives (5:44-6:2; 6:16-19; 6:36-42).

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Regarding claim 22: Zech *et al.* teaches a base component comprising N-alkylaziridino compounds {corresponding to Z1 and Z2} and a catalyst component {corresponding to instant formula K} (5:44-6:2).

Regarding claim 23: Zech *et al.* teaches a dental material (1:12-15; 1:55-59, 7:45-50).

The Office realizes that all the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed reagents and was prepared under similar conditions. Therefore, the claimed effects and physical properties, i.e. a Shore A hardness within 20 minutes of mixing base and catalyst at room temperature of at least 80% of the Shore A hardness reached after 24 h, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects with only the claimed ingredients.

Regarding claim 24: Zech *et al.* teaches dental impression materials (1:10-15).

Regarding claim 25: Zech *et al.* teaches the number of N-alkylaziridino groups equal to 1 {corresponding to instant formula Z2} (6:53-57).

The Office realizes that all the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed reagents and was prepared under similar conditions. Therefore, the claimed effects and physical properties, i.e. an acceleration of the setting rate, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be presented to support applicant's position; and (2) it would be the Office's

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position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties and effects with only the claimed ingredients.

Regarding claims 26-27: Zech *et al.* teaches pre-dosed pack units of base and catalyst {a kit}, and double chambered cartridges {base and catalyst separated} [instant claim 26] with static mixing tube [instant claim 27] (6:3-5; 6:53-57).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zech *et al.* (WO 01/17483). For the purpose of examination, Zech *et al.* (US 6,894,144) was used as the English translation of Zech *et al.* (WO 01/17483).

Regarding claim 21: Zech *et al.* teaches a method of preparing a composition (1:10-11) comprising mixing a mixture of N-alkylaziridino compounds (5:56-62; 6:53-64; 7:45-46), wherein N-alkylaziridino compounds have aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4, wherein preferred embodiments contain at least 2, or at least 3 aziridino groups {corresponding to instant formula Z1} (6:53-64), wherein the compounds have different polymer backbones (6:65-7:4). Zech *et al.* teaches mixtures of at least up to 60% of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and at least up to 5% of polyether compounds which contain at least 3 aziridino groups (6:53-67).

Zech *et al.* does not disclose an embodiment containing a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2}. However, at the time of invention

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a person of ordinary skill in the art would have found it obvious to utilized a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2} in a dental impression material based on the invention of Zech *et al.*, and would have been motivated to do so since Zech *et al.* suggests that N-alkylaziridino compounds having aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4 {corresponding to instant formula Z1} are useful as constituent (D) of the base component (5:56-61; 6:58-67).

Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zech *et al.* (WO 01/17483). For the purpose of examination, Zech *et al.* (US 6,894,144) was used as the English translation of Zech *et al.* (WO 01/17483).

Regarding claim 28: Zech *et al.* teaches a composition (1:10-11) comprising a mixture of N-alkylaziridino compounds (5:56-62; 6:53-64), wherein N-alkylaziridino compounds have aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4, wherein preferred embodiments contain at least 2, or at least 3 aziridino groups {corresponding to instant formula Z1} (6:53-64), wherein the compounds have different polymer backbones (6:65-7:4). Zech *et al.* teaches mixtures of at least up to 60% of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and at least up to 5% of polyether compounds which contain at least 3 aziridino groups (6:53-67).

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Zech *et al.* does not disclose an embodiment containing a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2}. However, at the time of invention a person of ordinary skill in the art would have found it obvious to utilized a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2} in a dental impression material based on the invention of Zech *et al.*, and would have been motivated to do so since Zech *et al.* suggests that N-alkylaziridino compounds having aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4 {corresponding to instant formula Z1} are useful as constituent (D) of the base component (5:56-61; 6:58-67).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zech *et al.* (WO 01/17483). For the purpose of examination, Zech *et al.* (US 6,894,144) was used as the English translation of Zech *et al.* (WO 01/17483).

Regarding claim 21: Zech *et al.* teaches a method of preparing a composition (1:10-11) comprising mixing a mixture of N-alkylaziridino compounds (5:56-62; 6:53-64; 7:45-46), wherein N-alkylaziridino compounds have aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4, wherein preferred embodiments contain at least 2, or at least 3 aziridino groups {corresponding to instant formula Z1} (6:53-64), wherein the compounds have different polymer backbones (6:65-7:4). Zech *et al.* teaches

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mixtures of at least up to 60% of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and at least up to 5% of polyether compounds which contain at least 3 aziridino groups (6:53-67).

Zech *et al.* does not disclose an embodiment containing a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2}. However, at the time of invention a person of ordinary skill in the art would have found it obvious to utilize a mixture of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and only 1 aziridino group {corresponding to instant formula Z2} in a dental impression material based on the invention of Zech *et al.*, and would have been motivated to do so since Zech *et al.* suggests that N-alkylaziridino compounds having aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4 {corresponding to instant formula Z1} are useful as constituent (D) of the base component (5:56-61; 6:58-67).

Response to Arguments

Applicant's arguments filed with the amendment entered with the RCE have been considered but are moot in view of the new ground(s) of rejection.

Zech *et al.* (US '144) discloses a composition (1:10-11) comprising a mixture of N-alkylaziridino compounds (5:56-62), wherein N-alkylaziridino compounds have aziridino equivalent masses being able to be varied from 500 to 25000 g/equivalent and the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4, wherein preferred embodiments contain at least 2, or at least 3 aziridino groups

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{corresponding to instant formula Z1} (6:53-64), wherein the compounds have different polymer backbones (6:65-7:4) [Zech *et al.* discloses mixtures of at least up to 60% of polyether compounds which carry at least two aziridino groups {corresponding to instant formula Z1} and at least up to 5% of polyether compounds which contain at least 3 aziridino groups (6:53-67); Additionally, Zech *et al.* discloses the number of N-alkylaziridino groups being able to be varied between 1 {corresponding to instant formula Z2} and 4].

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PEPITONE whose telephone number is (571)270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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29-June-09

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit
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